

**ABSTRACT**

The invention relates to an industrial method for producing an interest heterologous RNA and to a system for carrying out said production method consisting (1) in transforming mitochondrions of yeast cells free of mitochondrial RNA with a mitochondrial transcription vector comprising at least one copy of the DNA encoding said interest heterologous RNA which are controlled by regulatory element(s) of the mitochondrial transcription and a reporter gene thereof or a fragment of said reporter gene, 2) identifying yeast transformants by incorporating the interest DNA into the mitochondrions thereof, (3) culturing the yeast mitochondrial transformants selected at the stage (2), (4) isolating the mitochondrions from the yeast mitochondrial transformants obtainable at stages (3) and in extracting and purifying the interest heterologous RNA from said mitochondrions.